

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)	
)	
Wireline Competition Bureau Seeks Focused)	WC Docket No. 13-184
Comment on E-Rate Modernization)	

COMMENTS OF SOUTH TEXAS ASSOCIATION OF SCHOOLS
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Introduction

The Region One area lies along the Texas-Mexico international border and encompasses a seven county area including the area of Cameron, Hidalgo, Jim Hogg, Starr, Webb Willacy, and Zapata Counties. The geographic location of the Region One area lends itself to serving a diverse and unique student population compared to other areas of the state. With over 419,000 students in 37 public school districts and 10 charter school systems, Region One schools serve a high percentage of economically disadvantaged students (85%), the state's highest percentage of Hispanic students (97.5%), English Language Learners (34.8%), migrant students (4.68%), and English as a Second Language students.

The Region One area is an area where you can see dilapidated houses in areas called “colonias” where running water and electricity is considered a luxury. These areas often have unpaved

roads that are muddied and impassable when heavy rains or bad weather arrives. As dreadful as these conditions are, you can also witness families calling these areas “home”; their homes consisting of cardboard boxes or school buses.

Region One School districts strive continuously to develop innovative programs and to seek out opportunities that will help the district meet the needs of the students. Additionally, school districts pursue avenues that will support students and bring them to an equal level to the extent that these students have access to instructional resources and technology.

While this paper is a discussion on technology and funding issues in the K-12 environment, let us not forget that the knowledge and skills a K-12 student learns today is the basis for a college education or employment in the increasingly technological workplace. Many colleges and universities have moved to digital textbooks and the use of laptops/tablets for instruction. Many offer on-line courses for specific subjects that are Internet based and cannot be attended other than through the Internet. Our students must be prepared to enter this arena with knowledge that allows them to effectively use technology as an educational and workplace tool.

Many mobile device initiatives in the Rio Grande Valley would not be possible if not for E-Rate. With increased devices on the network comes the need for increased bandwidth. District in the Rio Grande Valley would not be able to afford the bandwidth needed to support such devices on the network.

Although school districts in the Region One area have benefitted greatly from the E-rate program, the ever changing technology and academic requirements require upgrades to maintain and expand the current networks. This requires an ongoing economic support system to be in place such as E-rate funding.

School Districts in the Rio Grande Valley have participated in the E-Rate Program since its inception and appreciate the opportunity to present the following comments in response to the Commission’s Public Notice proceeding “Wireline Competition Bureau Seeks Focused Comment on E-Rate Modernization”.

¶10 – We seek comment on whether the Commission should change the current priority two funding category by allocating annually a set amount of E-rate funds which are essential to ensuring high-capacity reaches students and library patrons

The South Texas Association of Schools agrees with setting aside a portion of the E-Rate funds to be used by Districts that are building new schools to augment their funding allocation to purchase the additional network cabling and equipment needed to open a new facility. Other than that, the South Texas Association of Schools firmly believes that every school eligible for E-Rate funding should be allocated a portion of the total available E-Rate funds each year using the Simplified Funding Formula included as an attachment with the FCC Public Notice (WC Docket No. 13-184) with the following modifications:

- Dissolve the current Priority 1/Priority 2 distinction and allow schools to spend their funding allocation on eligible equipment and services in the way that makes the most sense for the district.
- Allow the school district to aggregate the allocations for all schools in the district and spend the portion of their total allocation at each campus that they believe best meets the needs of their schools and the district as a whole.
- Remove the 2-in-5 rule which currently leads to over-buying.

Implementing the Simplified Funding Formula with these modifications provides an amount of money each year that schools can plan on, equitably distributes funds among all eligible entities, and provides incentive for districts to spend their allocation wisely.

¶11 – We seek comment on whether internal wiring, switches and routers, wireless access points, and the software supporting these components are the right categories of equipment and software to fund for the purpose of getting high-capacity broadband from the building's front door to the computer, tablet, or other learning devices in schools and libraries

The South Texas Association of Schools agrees that this basic classification of equipment represents the equipment necessary to provide the basic infrastructure for providing high-speed internet access to the end user devices. This equipment and software should continue to be funded by E-Rate.

¶12 – We seek further focused comment on what services, software or equipment are necessary to enable high quality, high-capacity networks inside schools and libraries, and whether such services, software and equipment should qualify for support

Additional equipment and services are necessary in order to provide a safe and secure computing environment. The firewall is an example of this type of equipment. Without an adequate firewall, the school or library network becomes more exposed to hacking attempts. Many schools and libraries that currently have existing firewalls will likely need to upgrade these devices as they increase the capacity of their Internet connection.

Traffic shaping appliances/services should qualify for E-Rate funding as they provide a tool to mitigate unwanted network Internet traffic, freeing up valuable Internet bandwidth. Traffic shaping (also known as "packet shaping") is a computer network traffic management technique which delays some or all datagrams to bring them into compliance with a desired traffic profile. Traffic shaping is a form of rate limiting, which increases usable bandwidth for some kinds of packets by delaying other kinds. In this case the users will experience a low quality service and may get the misleading impression that a site is inherently slow or unreliable which eventually may lead to preference of other sites between users.¹ A traffic shaping appliance can assist schools in limiting traffic to less desirable sites that, because of heavy usage, are limiting available bandwidth needed for instructional purposes.

Network security management for wireless devices should also be eligible for E-Rate discount. With the implementation of 1:1 initiatives and Bring Your Own Device (BYOD) initiatives, schools are bombarded with not only traffic on their network, but a combination of school-owned and private mobile devices. Ensuring that these private mobile devices are properly restricted on the network is vital to maintaining a secure network.

Caching appliances and services provide a unique opportunity to actually reduce the necessary bandwidth needed by a school or district by selectively and intelligently storing information for web pages that are being accessed, allowing subsequent requests for the same web page to be displayed from the cache rather than requiring that the page be retrieved from the Internet a second or third time.

Content Filtering is not currently eligible for E-Rate discount, but is required in order to be compliant and able to receive E-Rate funding. This unfunded mandate places a burden on schools but provides no financial assistance for acquisition. As with the firewall, as schools and

¹ http://en.wikipedia.org/wiki/Traffic_shaping

libraries increase their Internet capacity, the filtering solution needs to scale-up to meet increased bandwidth requirements.

Metropolitan area network (MAN) fiber connectivity between schools, even if the connection crosses public roadways, should be eligible for E-Rate funding. Districts should be allowed to purchase a single connection to the District network operations center (NOC) from the Internet service provider, and then provide connectivity from the NOC to each school to share the single high-capacity broadband Internet connection.

With this scenario, you achieve economy of scale by being able to purchase one large Internet connection, which means the amount of E-Rate funding required for the same amount of high-capacity internet connectivity at the schools is less. This single Internet “pipe” is also shared among all schools, so it is easier to use a greater percentage of what is being paid for without some campuses suffering from not having enough bandwidth, and some bandwidth at other schools sitting idle. The issue that needs to be addressed is that there still needs to be a means to share that single high-capacity Internet connection with the schools. This can be accomplished by leasing a telecom circuit between the NOC and each school, or by installing a fiber-optic cable or microwave link between the NOC and each school.

Lease costs for the telecom circuit are an ongoing Priority 1 service cost, and will likely offset (or more likely exceed) the E-Rate savings gained by moving to a single, larger Internet connection. The microwave link is a one-time cost, and the equipment should last for 5-7 years, however, there are limitations on throughput, and if available the cost for 10 Gbps microwave connectivity is probably cost prohibitive. Allowing school Districts to install fiber-optic cable to connect their NOC to each campus provides a one-time cost. The fiber-optic cable is currently capable of transmitting at speeds of 1 Gbps up to 10 Gbps or even 40 Gbps at a reasonable cost for the proper fiber-optic transmit modules.

The South Texas Association of Schools believes that fiber-optic cable, installed using directional boring, is the most cost-effective long-term solution for us to provide connectivity for our school district. The South Texas Association of Schools would like to see the cost of installation of private fiber-optic cable between a school district network operations center and each school in the district added to the eligibility list. However, some districts might still need to have leased circuits for connectivity due to the large size of the district. Both leased and private fiber should continue to be options. If a mandated change to the private fiber option were to occur, a phase in period of 5 years should be available to districts.

¶13 – We seek comment on ways to provide more widespread access to funding for internal connections in order to enable schools and libraries nationwide to take advantage of high-capacity broadband to their buildings with robust internal networks

The South Texas Association of Schools firmly believes that the best way to ensure that the largest number of schools are able to take advantage of E-Rate funding would be to allocate a portion of the total available E-Rate funds each year using the Simplified Funding Formula included as an attachment with the FCC Public Notice (WC Docket No. 13-184) with the following modifications:

- Dissolve the current Priority 1/Priority 2 distinction and allow schools to spend their funding allocation on eligible equipment and services in the way that makes the most sense for the district.
- Allow the school district to aggregate the allocations for all schools in the district and spend the portion of their total allocation at each campus that they believe best meets the needs of their schools and the district as a whole.
- Remove the 2-in-5 rule which currently leads to over-buying.

Implementing the Simplified Funding Formula with these modifications provides an amount of money each year that schools can plan on, equitably distributes funds among all eligible entities, and provides incentive for districts to spend their allocation wisely.

¶14 – We seek comment on limiting an applicant's ability to receive internal connections funding to once every five years while retaining the existing prioritization method.

The South Texas Association of Schools opposes limiting internal connections to 1-in-5 years, and advocates for the repeal of the 2-in-5 rule. However, if the determination is made to continue with any form of X-in-X year's model, the network operations center should be eligible for E-Rate funding as an independent entity, and not count against any of the schools.

These artificial restrictions force schools to over-buy in the years that they are funded. The 2-in-5 rule was originally established because schools with lower discount percentages were not being funded. It was believed that by only allowing schools to purchase internal connections 2 years out of every 5 years, that funding would naturally become available to the lower percentage discount schools over time. What ended up happening was that schools went all out in the years that they could purchase, and absorbed all available funds well before internal connection funds were available to schools in the lower brackets. Additionally, since the network operations center impacts every school served, it makes it very difficult to plan upgrades as they are needed and further forces schools to replace equipment more often than necessary for fear of missing an opportunity in one of the purchase years.

By implementing the Simplified Funding Formula with modifications, as described in ¶10 above, there would be less inclination to over-buy. The inclination would shift to determining the best methodology for spending the funds that were allocated to the district. Additionally, since the annual E-Rate funds available for each year would be equitably allocated across ALL schools, every school could count on E-Rate funding EVERY year, and schools would begin to think about the best ways to spend what they were allocated.

There would need to be some amount of the E-Rate funds set aside for new schools. Districts building new schools would receive an additional allocation for each new school based on the size of the school. These one-time additional funds would be available to establish the network in the new school. The amount should be equal to the average nation-wide cost to wire and equip a school of the size being built.

¶15 – If the Commission were to adopt a five-year upgrade cycle approach, should the one-in-five limitation apply at the level of applicants or, as it does today, at the level of individual school and library building?

The South Texas Association of Schools adamantly opposes the one-in-five limitation. However, if it is to be implemented, the rule should apply at the school level, and additionally the network operations center, which currently counts against every school that it services, should be considered a separate eligible entity for funding purposes.

¶16 – If available funding is insufficient to fund all applicants at a particular discount level in a given funding year, how should the Commission decide which applicants to fund?

Decisions should be made based on a formula that gives preference to schools with a high level of socio-economic disadvantaged students (free and reduced lunch program). The South Texas Association of Schools opposes any decision on funding based on measuring cost per student served.

¶17 – We seek comment on limiting an applicant's ability to receive funding for internal connections that support high-capacity broadband to a single funding year until all other applicants have received support or declined the opportunity to seek funding in at least one funding year, starting in funding year 2015.

The South Texas Association of Schools is opposed to this methodology for attempting to spread funding across all schools over time. Because it will be unclear on how long it would be before funding became available again, this methodology will result in schools over-purchasing in the years that they are funded in a manner similar to what we are seeing with the current 2-in-5 rule.

This methodology would also punish districts that are growing, since new facilities built mid cycle would not be eligible for funding. Finally, the uncertainty of when funds would be available next, and how much would be allocated to the school, would not allow staff to properly plan for funding – feast and famine.

¶18 – Should the rotating eligibility limitation apply at the level of applicants or, as the two-in-five rule does today, at the level of individual schools and library?

The South Texas Association of Schools does not support rotating eligibility, but if implemented it should be at the individual school/library level so that new schools/libraries being built are immediately eligible in the year they come online.

¶19 – If funding is insufficient to fund all eligible applications at a particular discount level in a given funding year, should the Commission give preference to the applicants with the highest percentage of students receiving free and reduced school lunches?

Yes.

¶20 – We seek comment on adopting a funding method that would provide some support for internal connections that support high capacity broadband to all eligible applicants in each funding year, as opposed to the cyclical funding method described above.

The South Texas Association of Schools firmly believes that the best way to ensure that the largest number of schools are able to take advantage of E-Rate funding would be to allocate a portion of the total available E-Rate funds each year using the Simplified Funding Formula included as an attachment with the FCC Public Notice (WC Docket No. 13-184) with the following modifications:

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- Allow the school district to aggregate the allocations for all schools in the district and spend the portion of their total allocation at each campus that they believe best meets the needs of their schools and the district as a whole.
- Remove the 2-in-5 rule which currently leads to over-buying.

Implementing the Simplified Funding Formula with these modifications provides an amount of money each year that schools can plan on, equitably distributes funds among all eligible entities, and provides incentive for districts to spend their allocation wisely.

¶21 – We seek comment on using a simplified version of the formula proposed by Funds for Learning and a coalition of schools and school groups to set available funding levels for each applicant.

The South Texas Association of Schools firmly believes that every school eligible for E-Rate funding should be allocated a portion of the total available E-Rate funds each year using the Simplified Funding Formula included as an attachment with the FCC Public Notice (WC Docket No. 13-184) with the following modifications:

- Dissolve the current Priority 1/Priority 2 distinction and allow schools to spend their funding allocation on eligible equipment and services in the way that makes the most sense for the district.
- Allow the school district to aggregate the allocations for all schools in the district and spend the portion of their total allocation at each campus that they believe best meets the needs of their schools and the district as a whole.
- Remove the 2-in-5 rule which currently leads to over-buying.

Implementing the Simplified Funding Formula with these modifications provides an amount of money each year that schools can plan on, equitably distributes funds among all eligible entities, and provides incentive for districts to spend their allocation wisely.

¶22 – In addition to ensuring that all applicants have the opportunity to receive at least some internal connection funding each year, adopting this annual allotment could have the benefit of providing applicants certainty about the amount of funding that would be available to them each year. We seek comment on this consideration.

The South Texas Association of Schools agrees that this methodology provides a defined “budget” that schools/libraries could use to pay for equipment, upgrades and/or maintenance of existing equipment. By providing that predictable “budget” amount, schools would be able to plan better. Additionally, because there is a predictable “budget” schools could begin to think more long-term, allowing them to identify more cost effective ways to purchase and deploy equipment and services.

¶22 – Should district or library systems be required to spend those funds at specific schools or libraries in certain proportions? Or should each applicant have the flexibility to spend the funds as it decides across the district or library system?

The South Texas Association of Schools advocates for school districts to have maximum flexibility to spend at the schools that make the most sense to the district or library system in light of their long-term plans and goals.

¶23 – Are there variations on the options described above or other methods the Commission should consider employing to prioritize funding for high-capacity internal connections?

The South Texas Association of Schools contends that the “Students impacted per dollar spent” model is not a good measure. Each campus/library is unique at any given point in time, and it is essential to provide the school district or library system the maximum flexibility in determining what project best meets their needs.

The Simplified Funding Formula, with modifications discussed in ¶10, provides the most equitable distribution of E-Rate funds. Beyond that, providing additional funds for new construction to help offset the initial cabling of the building would seem prudent.

¶26 – We seek comment on whether the Commission should undertake a limited initiative, within the existing priority one system, to incent the deployment of high-capacity broadband connections to schools and libraries, and what types of fiber-deployment or other high capacity, scalable broadband technologies that meet the connectivity goals in the E-rate Modernization NPRM, should be eligible for funding.

The South Texas Association of Schools advocates for the addition of Metropolitan Area Network fiber-optic cable installations to the services eligibility list. Metropolitan area network (MAN) fiber connectivity between schools, even if the connection crosses public roadways, should be eligible for E-Rate funding. Allowing for the eligibility of lighting dark fiber and the associated costs with the deployment of this fiber would be a one-time cost and in the long run would produce a sizable savings.

¶30 – We seek comment on how best to distribute support among applicants for high-speed connections to schools and libraries.

The South Texas Association of Schools firmly believes that every school eligible for E-Rate funding should be allocated a portion of the total available E-Rate funds each year using the Simplified Funding Formula included as an attachment with the FCC Public Notice (WC Docket No. 13-184) with the following modifications:

- Dissolve the current Priority 1/Priority 2 distinction and allow schools to spend their funding allocation on eligible equipment and services in the way that makes the most sense for the district.
- Allow the school district to aggregate the allocations for all schools in the district and spend the portion of their total allocation at each campus that they believe best meets the needs of their schools and the district as a whole.
- Remove the 2-in-5 rule which currently leads to over-buying.

Implementing the Simplified Funding Formula with these modifications provides an amount of money each year that schools can plan on, equitably distributes funds among all eligible entities, and provides incentive for districts to spend their allocation wisely.

¶31 – We seek comment on ways to prioritize applications for deployment costs in the event that the demand for such funds exceeds availability.

The South Texas Association of Schools advocates use of the same funding approach that is currently used, 90%, 89%, etc., tempered with the addition of highest percentage free and reduced lunch for applications within a funding band. Implementation of the Simplified Funding Formula, as previously discussed, would eliminate the issue of demand exceeding supply since each eligible entity would have a pre-determined allocation for the E-Rate funding year that they could use to address their needs.

¶32 – We seek comments on adopting one or more objective impact and/or efficiency metrics to prioritize applications.

The South Texas Association of Schools recommends the implementation of an “efficiency points system” for upgrades, such as from two T3 circuits to a single 100Mbps metro Ethernet circuit, where the circuit and internet access costs post upgrade are significantly less than pre-upgrade. By prioritizing applications that promise more efficient use of the E-Rate funds, you will be providing incentives for schools to find creative ways to reduce long-term costs.

¶36 – Should the Commission require applicants that are seeking E-rate support for upgrading high-capacity connections to school buildings or libraries to demonstrate that they have a plan and the capacity to use those services within their buildings?

The South Texas Association of Schools absolutely agrees with a requirement for these applicants to demonstrate the existence of a plan and the capacity to use the services.

¶41 – We seek comment on an approach to phase out support for voice services by gradually reducing the support for voice services over at five-year period.

The South Texas Association of Schools supports the gradual reduction of funding for voice services over a five year period – provided funding is made available on a “free and reduced lunch” weighted student- count formula that provides each school with a predictable multi-year budget that allows them to plan for an implement the changes necessary to migrate from traditional voice services to VOIP. To make this possible, all associated VOIP costs would need to be eligible (ie: servers, call managers, licenses and PRIs). We are also in support of keeping cellular services that support instruction on the eligible services list.

¶44 – We seek comment on whether there are any voice services that should be excluded from the phase out?

The South Texas Association of Schools proposes that certain voice services be excluded from the phase-out plan. These would include inbound/outbound trunks at network operations center for districts that choose to maintain VOIP within the district only, and still rely on POTS for outside connections, and telephone lines for elevators and alarm systems. We are also in support of keeping cellular services that support instructional activities on the eligible services list.

¶46 – Should the Commission consider eliminating all support for voice services starting in funding year 2015?

The South Texas Association of Schools advocates for continuing funding for specific voice services as detailed in ¶44 above.

¶47 – We seek comment on retaining support for voice services under a lower priority.

The South Texas Association of Schools sees this as a viable alternative that would provide incentive for schools to move away from voice services, while still providing funding for these services at a lower discount rate (not priority) for services that need to be continued (i.e. elevator phone lines, etc.)

¶56 – We invite suggestions of other types of projects the Commission should conduct with regard to meeting school/library connectivity needs, the amount that should be spent on any individual project, and the total budget for such projects.

The South Texas Association of Schools would like to see the cost of installation of Metropolitan Area network (MAN) fiber-optic connections (private fiber-optic cable between a school district network operations center and each school in the district) to be added to the eligibility list.

Submitted Respectfully,



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